



# *Microweather Moderation ( $\mu M$ )*

## Activity Description

Demonstrate the desirability (D), viability (V), and feasibility (F) of improving city flyability by altering the urban built environment to support advanced air mobility as envisioned by the Aeronautics Research Mission Directorate (ARMD) for ubiquitous urban air mobility and in the emerging NASA/FAA Vision 2045.

## Key DVF Barriers to Overcome (Needs)

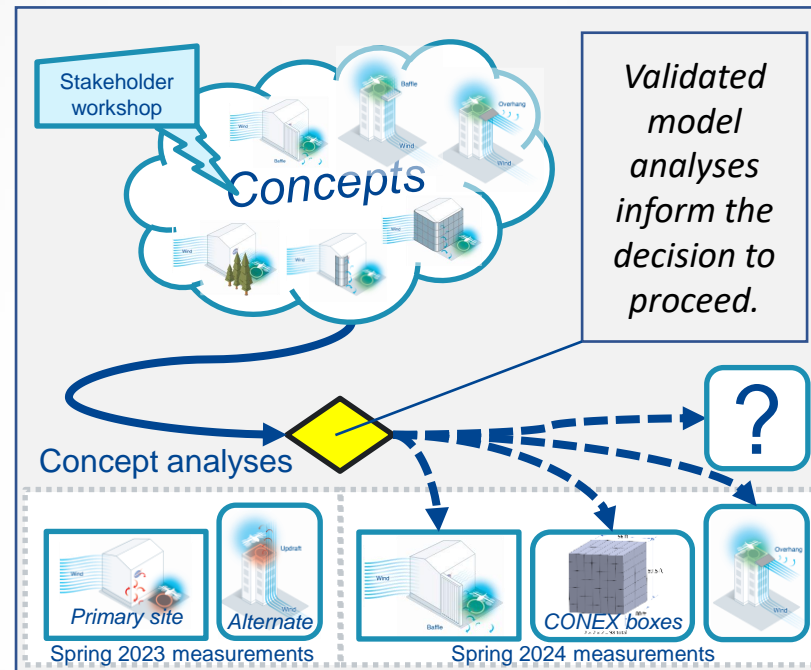
- (D) Microweather hazard analysis methods
- (V) Business case analysis methods
- (F) Undesirable microweather metrics

## Assessment Criteria

Demonstrate a cost-effective technology prototype that moderates undesirable microweather conditions to enable safe and reliable high-intensity urban air operations.

## ARMD Strategic Thrusts

- 1: Safe, Efficient Growth in Global Operations
- 5: In-time System-wide Safety Assurance
- 6: Assured Autonomy for Aviation Transformation



- Mar '22 Kickoff
- Sep '22 Measurement experimental design
- Jan '23 Stakeholder concepts workshop
- Mar '23 Workshop results decision
- Apr-Jun '23 Building measurements
- Sep '23 Moderation experimental design
- Feb '24 Experimental site plan
- Apr-Jun '24 Moderation measurements
- Sep-Nov '24 Closeout and transition

## Partners, Deliverables, & Transition

- LiDAR microweather measurement patent
- Measurement and modeling datasets
- Dual-Doppler lidar technique publication
- Measurements & modeling of microweather moderation techniques publication
- CFD & tunnel results publication
- Weather scout design publication
- Final report
- Transition to ongoing NASA project

## Preliminary moderation concepts

